The natural history of carpal tunnel syndrome in lactation

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Summary

In a retrospective postal study of 27 women who have developed carpal tunnel syndrome (CTS) in the puerperium, the condition was found to affect predominantly elderly primiparous women (mean age 31.5 years). The condition was associated with breastfeeding in 24 women. The three who did not breastfeed had less severe symptoms which resolved within one month of onset. The symptoms developed a mean of 3.5 weeks following delivery, lasted 6.5 months and started to resolve within 14 days of weaning. Symptomatic treatments with either splintage, diuretics, non-steroidal anti-inflammatory drugs or steroid injections provided some benefit. Two patients required surgical decompression. All patients were symptom-free by one year.

Introduction

Carpal tunnel syndrome (CTS), first described by Paget[1] in 1854, has been attributed to compression of the median nerve by the transverse carpal ligament[2]. The association of CTS with pregnancy was first documented by Walshe[3] in 1945. Since then the condition has been recognized as a complication of pregnancy, with an incidence reported to be between 1% and 50% of all pregnancies. The likelihood of developing CTS in pregnancy is increased in patients with pre-eclampsia, hypertension and oedema[4].

CTS presenting in the puerperium has been rarely reported. Snell[5] reported five cases of CTS in the puerperium, developing in elderly primiparous women. The condition appeared to be related to breastfeeding, in that the symptoms resolved within a few weeks of stopping breastfeeding in four of the cases reported. The purpose of this study was to further evaluate the natural history of CTS in the puerperium and to determine its relationship to lactation.

Materials and methods

A postal survey of mothers with CTS was conducted following an article placed in a women's magazine with a readership of predominantly young mothers. Women who had experienced symptoms suggestive of CTS while either pregnant or in the puerperium, were asked to participate. Those women who gave a history strongly suggestive of CTS while lactating were asked if their general practitioners could be contacted. Only those women whose general practitioners replied, confirming the diagnosis, were included in the study.

Results

The magazine, which has a circulation of approximately 110 000, provided 259 responses to the article. Forty women had developed symptoms suggestive of CTS following delivery of their infants, of whom 35 had sought the help of their general practitioner. All the general practitioners were contacted and the diagnosis of CTS was confirmed in 27 women. These women formed the basis of this study.

The average age of the study group was 31.5 years (range 26-38 years). Seventy-four per cent of the women were primiparous, 18% had a parity of 2 and 8% had a parity of 3. The multiparous women had had no symptoms of CTS in their earlier pregnancies. Symptoms of painless paraesthesia of a median nerve distribution developed 3.5 (±1.3 SD) weeks post-delivery (Table 1). Twenty-four of the 27 women breastfed their babies, and in all these women, symptoms continued for at least one month. The three women who did not breast feed had mild symptoms, which had completely settled within one month of their onset. Both hands were affected in 81% of women. Only two women (7%) had had symptoms of CTS prior to their pregnancies. No patient had a family history of CTS or had had pre-eclampsia complicating their pregnancies.

The mean duration of symptoms for the breastfeeding group was 6.5 (±3.0 SD) months (Table 1). In all the patients the paraesthesia was initially painless, however, in 25 women, symptoms progressed to painful paraesthesia. These 25 women were all woken by their pain several times at night. Sixteen women found that their symptoms were severe enough to affect their ability to look after their infants. Seventy-four per cent of the women considered

Table 1. Time relationships of symptoms of CTS

Timing of onset of symptoms	
Weeks post-delivery	*Number*
0-2	3 (11%)
2-4	15 (56%)
4-6	6 (22%)
6+	3 (11%)
Duration of symptoms	
Months	*Number*
0-2	3 (did not breast feed) (11%)
2-4	2 (7%)
4-6	6 (22%)
6-8	9 (33%)
8-10	4 (15%)
10+	3 (11%)
Interval between starting to wean and symptoms improving	
Weeks	*Number*
0-1	3 (12%)
1-2	8 (33%)
2-3	10 (41%)
3-4	2 (8%)
4+	1 (4%)

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Table 2. Treatment of CTS and claimed symptomatic improvements

Treatment given	*Number*	*Patients who claimed improvement*
Reassurance	10 (37%)	—
Splintage	7 (26%)	7 (100%)
Diuretics	6 (22%)	5 (83%)
NSAIDs	4 (15%)	3 (75%)
Steroid injection	3 (11%)	3 (100%)
Surgery	2 (7%)	2 (100%)

that their predominant symptom was paraesthesia, giving rise to a sense of clumsiness and a tendency to drop things.

Resolution of the symptoms of CTS bore a relationship to the cessation of breastfeeding (Table 1). In all breastfeeders, complete resolution of symptoms did not occur until breast-feeding had stopped. There was a mean delay of 14 days between starting to wean and a subjective improvement in the symptoms occurring. All patients were largely symptom-free within six weeks of stopping breastfeeding, and were completely symptom free within a year of delivery.

All patients had sought the attention of their general practitioners for this condition. Ten (37%) had been reassured that spontaneous resolution would occur (Table 2), and no further treatment was offered. Seven patients were given splints, which were worn mainly at night, and all these patients reported some improvement in their symptoms. Diuretics were given to six patients, five of whom considered that they derived some benefit, though this was short lived (less than three weeks) in four women. Non-steroidal anti-inflammatory drugs were given to four women, steroid injections were given to three, and carpal tunnel decompressions performed in two patients. The two women who underwent surgery had had severe symptoms for six months, with wasting of the thenar muscles. Interestingly, they were still lactating at the time of surgery.

Discussion

CTS when it occurs in association with pregnancy, usually develops in the last trimester and resolves within a few days of delivery. Occasionally surgical decompression of the median nerve may be indicated[6,7]. Tobin[8] reported 14 cases of CTS developing in pregnancy and documented, without comment, one case which developed in the puerperium. Snell[5] reported five cases of CTS developing in the puerperium, four cases of which developed de novo and one was greatly exacerbated by breastfeeding. He noted the clear relationship between breastfeeding and the severity of symptoms. The mean age of his patients was 29.8 years, with a range of 25 to 35. Four of the five patients had a parity of one when their symptoms developed. The patients in the present study were somewhat older, and were also predominantly primiparous. The syndrome, if it occurs in non-breastfeeding women, appears to be less severe and settles within a shorter time course than in lactating women.

All of Snell's patients[5] had bilateral disease, though in the present series only 81% of women had symptoms in both their hands. This study confirms the close association between the onset of symptoms of CTS and the establishment of lactation, as well as the resolution of CTS with weaning. Ekman-Ordeberg[4] noted that patients in his study who developed CTS during pregnancy were also relatively elderly (mean age 30.2 years), and all had generalized oedema. By contrast, in this study, no patient admitted to having been oedematous during pregnancy, or was diagnosed as having pre-eclampsia.

References

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